

METHOD AND APPARATUS OF ARRAYED, CLUSTERED OR COUPLED EDDY CURRENT SENSOR CONFIGURATION FOR MEASURING CONDUCTIVE FILM PROPERTIES

ABSTRACT OF THE DISCLOSURE

A method for minimizing measuring spot size and noise during film thickness measurement is provided. The method initiates with locating a first eddy current sensor directed toward a first surface associated with a conductive film. The method includes locating a second eddy current sensor directed toward a second surface associated with the conductive film. The first and second eddy current sensors may share a common axis or be offset from each other. The method further includes alternating power supplied to the first eddy current sensor and the second eddy current sensor, such that the first eddy current sensor and the second eddy current sensor are powered one at a time. In one aspect of the invention, a delay time is incorporated between switching power between the first eddy current sensor and the second eddy current sensor. The method also includes calculating the film thickness measurement based on a combination of signals from the first eddy current sensor and the second eddy current sensor. An apparatus and a system are also provided.